

A colourful clash is promised at the Spectrum end of the market. Richard King tests the TX8000

The Texter TX8000 sneaked onto the stage very quietly. This was amazing modesty for a machine that in almost every detail is unargued straight at the sinister Spectrum.

I tested a pre-production sample. Texter said that a few points remained to be cleared up, in particular the documentation and the tweaking of the TV signal.

### Presentation

The micro-arcos parked in foam, which should be strong enough to survive the rigours of the mail. All leads were included, but no demo tape. Texter apologised for this, and said that one should have been included.

The machine was easy to set up, needing only the power and TV leads to be connected; the tape recorder can be plugged in at any time.

### Documentation

The TX8000 aimed at customers who will be considering computers for perhaps the first time, so the introductory screen must be covered with extreme care in the production manual.

The one provided with the machine was obviously very preliminary — listing up the TX8000 personal computer was covered in a single page, but this seemed adequate for a confident person.

Apart from this, it had several omissions, the most serious of which was the absence of any explanation of the many up to four uses of a key. Since a machine at this price (£95) can be intended only for the toy, the complexities of multi-function keyboards must be made clear at an early stage to avoid disillusionment.

In the complete explanation of the Basic, several keywords appeared on the machine but were not mentioned in the text. These were COLOR, USE, SCREEN, INP, OUT and COPY. Texter explains that this was a straight translation from the Chinese. Does that mean that the manufacturer didn't have these words implemented when it was written?

A short quick-reference chart of the keywords was included, but was little better than a list of words in natural groupings. No attempt was made to provide syntax diagrams, parameter lists, keyword precedence, which means that you will have to experiment to find out what works and why, leaving aside what the expected result may be.

A list of the printable ASCII codes offered no information about what happens to codes 0...31 and 96...126 as printed. Finding out may be very interesting.

Texter assures us that a completely rewritten manual is being prepared. I hope the final version will be better than average because, despite my comments, I felt that the machine was fairly well presented.

### Construction

The case is cream-coloured plastic and seems sturdy enough to withstand use by younger hands. The upper ventilation slots



would make it extremely difficult for anything large to be pushed in, but the ones underneath are so temperate.

### Keyboard

The calculator-type keyboard closely resembles that of the Sinclair Spectrum. It has printed legends in white and dark brown on the 45 low-inked rubber keys,

with smaller white printed legends.

The marking reveals that it is multi-function with auto-repeat and uses single-key entries for Basic. A useful touch is the way that related keywords are grouped.

Other advantages over the Spectrum are that keywords on the TX8000 may be entered either by using the single-key method, or explicitly spelled. Being forced

# TX8000 Texet

to use single-key entry may speed learning, but it's patronising.

The key-spacing is correct for typists but this does not mean that it's suitable. For one thing, there is no space-bar, just a slightly larger-than-normal key at bottom right, where the right-hand shift-key would normally be.

Lowercase is also absent since the shifted values of the letter keys are merely used for the block graphic characters. Only X, C, V and B seem to have no shifted value.

The most important control-keys are on the right and have inverse legends above them. The topmost is BREAK below that and to the right is the FUNCTION key which is shift-RETURN, then the editing keys INSERT and RUBOUT, and INVERSE. The four lower-right keys, used for cursor-movement, have little arrows to show their effect.

There is no RESET button, which is surprising. The manual suggests that the best way to get out of an infinite loop is to 'pull the plug'. I don't agree. If I write a program with a bug like that in it, I want to be able to stop the program and look at the variables to find out what happened. RESET is just the ticket if BREAK won't work.

## Screen

The TX9000 will drive a normal TV tuned to channel 36/38 or a composite video colour monitor. A monochrome monitor can also be used, of course, but...

The display is a fairly small area in the centre of the screen surrounded by a dark green field, which has an anti-burner. On a Sony Trinitron the image was steady and moderately clear.

The red and orange showed a marked slushiness at the edges, although the other colours were acceptably sharp. Colour differentiation was rather poor, too. Cyan and green were as near as dammit the same, and the white was greyish.

The screen has two modes, 0 and 1. Mode 0 is the text display consisting of 10 lines of 32 characters. Mode 1 is pixel graphics divided 4/8/24, and Telex is stretching the term a little to call it 'high resolution'.

Although the machine doesn't have lower-case, it has Sindoor-style block characters each made up of a 2x2 set of pixels.

## Storage

Main storage is on cassette and Basic provides a rudimentary COS, with CSAVE, CLOAD, CRUN and VERIFY. There is no mention of file-handling or block-transfer, and so no text data-handling capacity.

The most frustrating part of getting to know a machine of this type is trying to find the correct setting for playback. I almost ran out of irreproducible cassettes.

## Expansion

At the back are the sockets for TV, composite video colour monitor, tape and power. There are also two metal plates

labelled 'memory expansion' and 'peripheral' which, powered in by screws, hint that the company may have plans for the machine.

Power is supplied through a low-voltage constant plug, as in many lower-end machines, driven by a plug-in cigarette. This plug is not robust enough to withstand constant use.

The tape socket is unusual, for cassette recorder lead supplied has two normal 3.5mm jack-plugs at the recorder end — the computer end is a 3.5mm stereo jack, which won't be able to use any old length of cable with a plug at each end.

Telex says disk-drives of some kind, other accessories and a 64K memory expansion unit will be introduced in soon afterwards. No dates. Details of interfaces

GCOSIB may be tented to. This is not allowed in many Basic, especially those descending from AppleSoft or Pet Basic.

Editing is fairly sophisticated, being accomplished by the function keys on the right. The lower four move the cursor, with the → key acting as a COPY key; the others just move. INSERT and DELETE are different. They work anywhere, even in old text left on the screen.

There were no facilities for machine-level programming, which means the USB function hard to get at, but overall the implementation appears to offer a reasonable mix of facilities which should prove popular with its owners.

## Support

Telex has been making calculations for the



Left to right: power, tape, monitor, memory and peripheral plates, TV

will be available, and more information will be in the new manual. Add-ons from other companies will have to wait till then.

## Software

The Basic is of a fairly standard Microsoft type, with IF... THEN... ELSE, but no more sophisticated control structures.

Accuracy is only to six digits — not really enough even for simple household accounting. The largest number would be 999.99 in pounds, the last digit being left out because it's always slightly wrong. Arrays seem to have only two dimensions.

This is not as bad as it first seems, since each dimension may be as large as memory will allow.

The graphics commands are a little weak. No PLOT... TO, LINE (x1, y1, x2, y2) or equivalent, but this could be remedied with a small machine-code library accessed by the USB command. I hope the makers or some enterprising programmer will provide this and other utilities.

There is no ON... GOTO/GOSUB command on the TX9000, which will annoy some users. Instead, the calculated

High Speed outlets for some time, and clearly that's where the TX9000 is aimed. No doubt many software houses will write for this machine. One hopes the quality will be better than the shoddy (but nice and cheap) stuff that people feed their long-suffering Spectrums, Bechs, Vic-20s and the like.

Telex promises a one-year guarantee, and repairs will be done at the Manchester headquarters. The company also says that the shops will be expected to exchange the machine if problems crop up early.

## Overview

It's a pity Telex chose to be so modest with its memory. 64K hardly these days and not much cheaper than 16K, which is itself pretty mean. Surely more advanced micro-technology and improvements in arithmetic processing would make the TX9000 useful in modest applications, although it will always be limited by the 45-character screen and lack of lower-case.

Even with the enhancements hinted at by those two metal plates on the back — say 64K or more — this could be a very nice beginner's machine at a reasonable price.

### Specifications

Price:	£2K
Processor type/speed:	Z-80A running at 3.58MHz
Standard RAM/expandable:	16K-64K with expansion
Text screen:	32 x 10
Graphic screen:	320 x 64
Keyboard:	47 calculator-type keys with auto-repeat
Storage:	Cassette
Interfaces:	Serial and parallel
OS/language(s):	Basic
Other languages:	None
Distributor:	Telex — sales will be through high street stores
Software supplied:	Demonstration tape